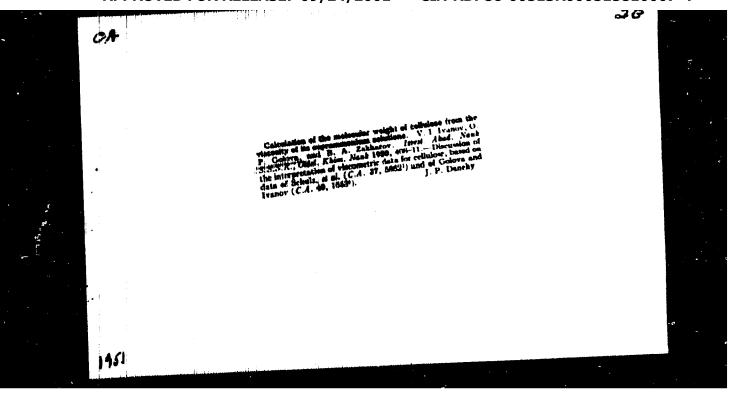
"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000515810007-4



GOLOVA, O.P.; IVAHOV, V.I.; MATAT, N.S.

\*\*Interstructural late in the strength of polygalaturonic acid. Doklady Akad. Hank S.S.S.R.

86, 1113-16 '52.

(CA 47 no.22:12251 '53)

\*\*Control of the strength of

COLDVA, O. P., and MAYAT, N.S.

"Oxidation processes in pulp manufacturing," a paper presented at the 9th Congress on the Chamistry and Physics of High Polymers, 28 Jan-2 Feb 57, Moscow, Forest Research Inst.

B-3,084,395

GOLOVA, O.P.; ANDRIYEVSKAYA, Ye.A.; PAKHOMOV, A.M.; MERLIS, N.M.

Transformations of cellulose at high temperatures. Report No.3: On formation of levoglucosan from glucose. Izv.AN SSSR.Otd. khim.nauk no.3:389-391 Mr '57. (MLRA 10:5)

1.Institut organicheskoy khimii im. N.D. Zelinskogo Akademii nauk SSSR. (Cellulose) (Levoglucosan)

# GOLOVA, O.P.; PAKHOMOV, A.M.; HIKOLAYEVA, I.I.

Transformation of cellulose at high temperatures. Report No.4:

Hiffect of the polymerisation degree of cellulose on the formation of levoglucosan. Isv.AN SSSR Otd.khim.nauk no.4:519-521 Ap '57.

(MIRA 10:11)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR. (Polymerization) (Cellulose) (Levoglucosan)

PARHOMOV, A.M.; GCLOYA.O.P.; MINDLAYMVA, I.I.

Thermal decomposition of trimethylcellulose in a vacuum. Inv.
AM SSSR Otd.khim.nauk no.4:521-523 Ap '57. (MIRA 10:11)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AM SSSR. (Thermochemistry) (Gellulose)

MERLIS, N.M.: GOLOVA, O.P.: SALDADZE, K.M.: NIKOLAYEVA, I.I.

Application of anionites for removing substances concomitant to levoglucosan from the products of thermal decomposition of cellulose in vacuum. Izv.AN SSSR.Otd.khim.nauk. no.7:880-581 Jl '57.

(MIRA 10:10)

1.Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.

(Ion exchange) (Levoglucosan) (Thermochemistry)

AUTHORS: Golova, C.F., Pakhomov, A.M., Andriyevskaya, ie.A. 62-12-16/20

TITLE: The Transformation of Cellulose at Increased Temperatures (Prevrashcheniya tsellyulozy pri povyshemykh temperaturakh)
Information Nr 6. The Influence Exercised by the Addition of Levo-

glucosan in the Thermal Decomposition of Cellulese in the Vacuum (Soobshcheniye 6. Vliyaniye dobayki glyrkozy na obranovaniye

levoglyukosana pri termoraspade tsellyulozy v vakuume).

FERIODICAL: Izvestiya All SSSR Otdelonge Khimicheskikh Nauk, 1957, Nr 12,

pp. 1499-1500 (USSR)

ABSTRACT: Previously carried out investigations led to interesting observations

concerning the influence exercised on the yield of levoglucosan, the physical structure of cellulose, and the length of the chain of their macromolecules /2". These investigations gave the authors the idea of the specifically negative influence exercised by glucosan upon the process of the formation of levoglucosan. In order to check this assumption, the influence exercised by the addition of / - and ) - glucose on the process of formation of levoglucosan was investigated. The presence of glucose in the thermal decay of cellulose decreases

Card 1/2 The presence of glucose in the thermal decay of collulose decreases the yield of levoglucosan to 30,, compared to the yield from cellu-

The Transformation of Cellulose at Increased Temperatures. Information Nr 6. The Influence Exercised by the Addition of Levoglucosan in the Thermal Decomposition of Cellulose in the Vacuum

62-12-18/20

lose of 55-60% at the same conditions. There are I figure and 2 Slavic references.

ASSOCIATION: Institute for Organic Chemistry AN USSR imeni N.D.Zelinskiy and Institute for Wood Products AN USSR (Institut organicheskoy khimii im. N.D.Zelinskogo Akademii nauk SSSR i Institut lesa Akademii nauk SSSR).

SUBMITTED: July 5, 1957

AVAILABLE: Library of Congress

Card 2/2 1. Cellulose-Transformations

Inportance of oxidizing for obtaining woodpulp from plant tizzues.
Sum.prcm. 32 no.6:10-11 Je '57. (HERA 10:8)

1.Inputitut less Akademii nauk SSSR.
(Moodpulp industry) (Oxidation)
(Plant cells and tissues)

GOLOVA, O.P.; PAKHONDV, A.H.; ANDRITEVSKAYA, Ye.A.

Hew data on the relation between the structure of polysaccharides (cellulose) and the trend of chemical reactions taking place in a thermal dissociation of these compounds. Dokl. AN SSSR 112 no.3: 430-432 Ja 157. (MERA 10:4)

1. Institut organicheskoy khimii im. N.D. Zelinskogo Akademii nauk SSSR. Predstavleno akademikom V.A. Karginym. (Polysaccharides) (Cellulose)

GOLOUA, O. P.

AUTHORS:

20-6-19/48 Golova, O. P., Pakhomov, A. M., Andriyevakaya, Ye. A., Krylova, R.G.

TITLE:

On the Machanism of the Thermal Decomposition of Cellulose in a Vacuum and on the Formation of 1,6-Anhydro-1,5-Glucopyramose, a Levoglucosan (O mekhanizme termicheskogo raspada tsellyulozy v vakmme i obrazovanii 1,6-angidro-1,5-glyukopiranozy - levoglyukozana)

PERIODICAL: Doklady AN SSSR, 1957, Vol. 115, Hr 6, pp. 1122-1125 (USSR).

ABSTRACT.

Hitherto there did not exist an unequivocal explanation for the formation mechanism of the substances last-mentioned in the title in thermal cellulose decompositions in a vacuum. It is true that this substance has an elementary composition of a structural-unit-member of cellulose, but it has a different hydroxyl position (at Ch instead of C6) and possesses 2 oxygen bridges instead of one 1 - 5, A formation mechanism of levoglucosan was suggested by Irvine and Oldham, namely through an intermediate stage of the cellulose hydrolysis as far as glucose and then a dehydration of the latter. Karrer confirmed this hypothesis by high leveglucosen yields from  $\beta$  - d-glucose. The above-mentioned reaction represents a special case of the thermal depolymerization of polysaccharides as far as the monomer. The authors thought it necessary to perform such investigations which are suitable to furnish data for the solution of principal problems. Such principal

Card 1/3

20-6-19/48

On the Machanism of the Thermal Decomposition of Cellulose in a Vacuum and on the Formation of 1,6-Anhydro-1,6-Glucopyranose, a Levoglucosan.

> problems are: 1) To attain a constant yield of levoglucosan in this commection, 2) the possibility of the formation of levoglucosan from  $\beta$  - d-glucose, 3) the influence exerted by the physical structure (compactness of the packing) of cellulose on its thermal decomposition and 5) the influence of the degree of polymerization. The following conclusions were drawn from the results of the work: 1) The small yield of levoglucosan from the thermal decomposition of an easily hydrolyzable cellulose, the glucose and the cell chicse with admixture of glucose, disproves the possibility of the existence of intermediate stages of the glucose-formation and the glucose-dehydration as far as levoglucosan, as an intermediate stage in the formation of levoglucosan from cellulose. These facts do not confirm the conception, spread in publications, on the mechmiss of a hydrolytic dehydration-formation of levoglucosan. 2) The substantial yield in the formation of levoglucosan (55-60%) is only attained when a certain chain-length of the cellulose macromolecule exists. Moreover a more compact cellulose-structure (packing) is necessary for this. The formation process of levoglucosan includes

Card 2/3

On the Mechanism of the Thermal Decomposition of Cellulose in a 20-6-19/48. Vacuum and on the Formation of 1,6-Anhydro-1,5-Glucopyranose, a Levoglucosan.

the decomposition of the cellulose molecule on the  $1,1-\beta$ -glucose bonds, as well as a subsequent isomerization of the resulting chain fragment into a Levoglucosan molecule. The chief conclusion can be extended to the thermal decomposition of other rolysaccharides, and probably also to other types of polymers. There are 1 figure, 2 tables and 1 Slavic reference.

ASSOCIATION: Institute for Organic Chemistry AN USSR imeni N. D. Zekinskiy and Forestry Institute AN USSR (Institut organicheskoy khimii imeni N. D. Zekinskogo Akademii nauk - Institut kesa Akademii nauk SSSR.).

PRESENTED: By I. N. Mazarov, Academician, June 7, 1957

AVAILABLE: Library of Congress

Card 3/3

GoLOVA, O.P.

AU THORS:

Golova, O. P., and Krylova, R. G.

20-3-19/46

TITLE:

Thermal Decomposition of Cellulose and its Structure (Termicheskiy raspad taellyulozy i yeye stroyeniye).

PERIODICAL: Doklady AN SSSR, 1957, Vol. 116, Nr 3, pp. 419-421 (USSR)

ABSTRACT:

The authors derived new knowledges from the study of the decomposition of cellulose which lead to a series of suppositions concerning the mechanism of the decomposition and the structure of cellulose. This was achieved by admitting the reagent to the compositions in more solidified parts. The used material was cotton cellulose prepared in mild conditions according to Corey and Grey. Its degree of initial polymerization was 2800; and 1500 (Sample number ! and 2), as well as 700 (sample number 3 obtained from sample number 2 by means of a light hydrolysis). The investigation comprised 1) - Performance of the decomposition, 2) - Production and analysis of its products, 3) - determination of the characteristics of cellulose even after its exposure to heating during a certain period. The methodology is described. A temperature of 300°C which permits a considerable yield of levoglucosan with a sufficiently

Card 1/4

Thermal Decomposition of Cellulose and its Stracture 20-3-19/46

decelerated process was determined. The results are summarized in table 1. In the case of thermal decomposition of cellulose the degree of polymerization first declines rapidly. The course taken by the curve, variou in each base according to the individual celaborar preparation. After 8 to 10 minutes, a certain continue point is attained in which all 3 curves coincide. With that the degree of polymerization attains a constant value of 200, according to size. With the decomposition concurred, only the quantity of cellulose decreases, whereas the molecular weight of the remainder remains stable. Curve 4 describes the dependence of the degree of decomposition of the heating up period That degree attains 8 to 4 % at the swithest point. It is proportional to the heating up period with all samples. Curves 5 and 6, - dependence of the yield of leveglucosan on the heating up period, - show that after the critical relue of the period (degree of polymerization approx. 200) has been establed, the yarld of leconicoma increases rapidly for subsequently attaining a constant value. Based upon these are knowledgen, the following mechanism of decomposition can be imagin in Chair and solection are torn and fragments with a degree of polyment-scan of approx. 200 are

Cand 2/4

Thermal Decomposition of Cellulose and its Structure 20-3-19/46

accumulated up to the critical point. This efficies that the decomposition takes place first at the periodically placed sections. The dehydration now taking risce chiefly, leads to a radical change of the clemensary member and to the formation of light volutile projects. In the second period (after having exceeded the oritical point), the thermal decomposition takes the course of a process of successive chamical conversion of rembers of the cellulose molecule fragment by splitting up of the elementary member, which, due to an interior isomerization converts into a nonomeric compound, viz.: Leveglacesan. These facts allow the conclusion that the splitting up of the leveglacesan molecule from the chain molecule produces an active center which in return produces an inner isomerization of the following member and the formation of levoglucosan. This process takes place as long as all fragment members are decomposed. The process generated in any chair molecule results thus in the complete decomposition of the molecule. The other molecules remain unchanged in this case. These results prove a periodical structure of the estion cellulose molecula of sections of various physical structure which

Card 3/4

Thermal Decomposition of Cellulose and its Stmustare

20-3-19/46

does not only determine the chemical, thermal and physical behavior of the macro-sample of the cellulose, but also the individual molecule of the latter.

There are I figure, and 2 references, I of which is Slavic.

ASSOCIATION: Institute of Silviculture AN USSR

(Institut less Akademii nauk SSSR)

PRESENTED:

Jume 29, 1957, by V. A. Kargin, Acatemician

SUBMITTED:

June 29, 1957

AVAILABLE:

Library of Congress

Card 4/4

AUTHORS:

Golova O. P., Kerlis, N. M.,

SOV/62-58-9-18/26

Volodina, Z. V.

TITLE:

The Preparation of 1,6-Anhydroglucofuranose by the Vacuum Pyrolysis of Cellulose (Polucheniye 1,6-angidroglyuko-furanose pri terranose to tallumine 1,6-angidroglyuko-furanose pri terranose pri terra

furanozy pri termoraspade tsellyulozy v vakuume)

PERIODICAL:

Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,

1958, Nr 9, pp 1127 - 1127 (USSR)

ABSTRACT:

Continuing their study of the chemical structure of the solid distillate prepared by the pyrolysis of

cellulose in vacuum, the authors found that the separating out a neutral material from the distillate by means of an anion-exchanger and the isolation of this material from a laevo-glucosan by crystallization gave a syrupy

product. The investigation of this latter showed that it contained 1,6-anhydroglucofuranose and did not contain any polymers. There are 3 references, 1 of which is Soviet.

Card 1/2

The Preparation of 1,6-Anhydroglucofuranose by the Vacuum Pyrolysis of Cellulose

sov/62-58-9-18/26

ASSOCIATION: Institut less Akademii nauk SSSR (Institute of Wood and Forestry, AS USER)

Card 2, 2

5(3) APTHORES:

Hpshtayn, Ya. V., Golova, O. P., Durynina, L. T. SOV/62-59-6-28/36

TITLE:

On the Production of B-1,6-anhydro-1,5-glucopyranese of Lewoglucesane by Thermal Decomposition of Cellulose in Superheated Vapor Current and at Low Pressure in the System (O poluchenii B-1,6-angidro-1,5-glyukopiranezy-levoglyukozana pril termoraspade tsellyulozy v toke peregretogo para pri pomizhanom damlenii v sisteme)

1 ERICDICAL:

Investiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Er 6, pp 1126 - 1127 (USSR)

ABSTRACT:

The thermal decomposition was mostly carried out in a high vacuum, which made an additional ocoling of the apparatus — down to —1000 necessary for the condensation of high-volatile products. The present paper gives some experimental results concerning a possible carrying out of the thermal decomposition at low pressure and by the use of heat carriers (superheated vapor or inert gases) which are directly introduced into the reactor. The method developed has several advantages. It makes it possible to remove the air oxygen from the reactor without a change in the remaining pressure, the heat carrier steadily penetrates the cellulose and further serves as a means of scoelerated removal of the

Card 1/3

On the Production of S-1,6-anhydro-1,5-glucopyranose of SCV/62-59-6-28/36 Levoglucosana by Thermal Decomposition of Cellulose in Superheated Vapor Current and at Low Pressure in the System

> decomposition products from the range of high temperatures. Furthermore, by the presence of the heating gas in the reactor the partial pressure of the high volatile substances which secondarily are formed, and thus the formation intensity of these substances, may be decreased. The vapor was introduced into the reactor with a pressure of 24-30 Hg. . The levoglucosane forming was extracted in the vapor current and condensed cutside the reactor. In the distillate the levoglucosane and free chemical soids were identified. For the purpose of checking this, the evaporation residues of the distillates were according to the method of Schottern and Baumann in Venn's modification transformed into behacle derivatives (Ref 3), after which the melting points of the products thus obtained were determined. (Table 1). In table 2 data concerning the yield in levoglucosane obtained by other scientists who heated the retort from outside are compiled (Refs 1-4). Table two shows the advantages of the method described here. There are still investigations as to the optimum conditions of this method being carried out. There are 2 tables and 4 references, 2 of which are Soviet.

Card 2/3

 On the Production of B-1,6-anhydro-1,5-glucopyranose of SOV/62-59-6-28/35 Levoglucosane by Thermal Becomposition of Cellulose in Superheated Vapor Current and at Low Prissure in the System

ASSOCIATION:

Enstitut less Akademii nauk SSSR (Forestry Institute of the

Academy of Sciences, USSR)

SUBMITTED:

November 18, 1958

Card 3/3

GOLOVA, O.P.; KRYLOVA, R.G.; MIKOLAYEVA, I.I.

Machanism of the thermal decomposition of cellulose in a vacuum.

Part 1: Comparative study of the thermal decomposition of cotton cellulose and cellulose hydrate. Vysokom. seed. 1 no.9:1295-1308 S 159.

1.Institut lesa AN SSSR. (Cellulese)

GOLOVA, O.P.; HHYLOVA, R.G.; NIKOLAYEVA, I.I.

Hechanism of the thermal decomposition of cellulose in a vacuum. Part 2: Inhibition of the thermal decomposition. Vysokom. soed. 1 no.9: 1305-1308 S \* 159: (MIRA 13:3)

1. Institut less AM SSSR.

(Cellulose)

5 (3) - AUTHORS:

Mayat, N. S., Golova, O. P.

SOV/74-28-9-5/7

TITLE:

The Stability of Polysaccharides in Alkaline Medium

PERIODICAL:

Uspakhi khimii, 1959, Vol 28, Nr 9, pp 1114-1133 (USSR)

ABSTRACT:

The main object of the present paper is the problem concerning the influence of the semi-acetal group on the decomposition of the polysaccharide in alkaline medium and the chemical conversions occurring during decomposition. The analysis and the generalization of data on the conversion of mono-, di-, and poly-saccharides under the action of lyes have shown that their constancy in an alkaline medium, in the absence of oxidizing agents are influenced by one and the same factor, i.e. the presence of a reducing semi-acetal group at the end of the molecule. Owing to its tendency to the formation of enol this group may yield unstable en-dioles of the polyoxy compounds which are exposed to further conversions in the alkaline medium. According to the conditions these conversions may in the case of the monosaccharides result in the following: 1) Epimerisation. 2) Decomposition of the molecule into fragments with a smaller number of carbon atoms. 3) Isomerization in saccharinic acids. The influence of the

Card 1/4

The Stability of Polysaccharides in Alkaline Medium SOV/74-28-9-5/7

semi-acetal group on the molecules of the di- and polysaccharides chiefly results in the loosening of the glukoside bonds in the close neighborhood. The rate and the intensity of the decomposition and consequently also the loss in weight of the high-molecular polysaccharide (cellulose) is determined by three factors: 1) by the number of the semi-acetal groups, i.e. by the polymerisation degree of the preparation; 2) by the accessibility of the preparation to lyes, i.e. by the density of packing. 3) by the interrelations between the rates of reaction and of destruction and the inhibition, i.e. by the conditions of the effect of the lye. In spite of the characteristics of "destruction from the reducing end" this kind of decomposition differs only slightly from the decomposition of the oxidized polysaccharides under the same conditions. On the contrary, both kinds of decomposition are due to the same reason, i.e. the presence of a carbonyl group capable of enol-formation. The basic difference in that the carbonyl groups in the oxidized polysaccharide are distributed not only at the end, but are over the entire chain of molecules. This brings about the decomposition of the latter into fragments. The formation of new semi-acetal-end-

Card 2/4

The Stability of Polysaccharides in Alkaline Medium

SOV/74-28-9-5/7

gradus causes the destruction of the molecule from the reducing end. Thus, the decomposition of the oxypolysaccharide into fragments and the "destruction from the reducing end" are closely related and may occur at the same time. "The destruction from the reducing end" should be taken into consideration in the investigation of oxidative decomposition products of the polysaccharides, in the determination of functional groups in polysaccharides and their products of deposposition, and in the determination of the molecular weight of polysaccharides in alkaline medium. They must also be taken into account in the precipitation of cellulose from vegetable tissue, and in the processing of cellulose in an alkaline medium. The destruction from the reducing end, inevitable under these conditions in a major or minor degree, cames considerable losses in the shape of low-molecular substances. A reduction of these losses may - in principle be obtained by different means: by transformation glucosides, by the reduction or the oxidation of semi-acetal groups and by inhibiting the destruction by means of calcium- and other salts. An important factor for the reduction of the cellulose losses is the maintenance of their high molecular weight in

Card 3/4

(3)

The Stability of Polysaccharides in Alkaline Medium SOV/74-28-9-5/7

the case of the reduction of the molecular weight being commoted with the appearance of new, reducing semi-acetal groups. This may be realized in different maps. The following Soviet authors are mentioned: V. I. Ivanov, Ye. D. Kaveranev, Z. I. Kuznetsova, V. M. Berezovskiy, S. N. Danilov, A. M. Gakhokidze. There are 1 table and 85 references, 7 of which are Soviet.

ASSOCIATION:

In-t vysokomolekulyarnykh soyedineniy AN SSSR (Institute of High-molecular Compounds, AS USSR)

Card 4/4

5 (3) AUTHORS:

S0Y/79-29-3-52/61

Golova, O. P., Merlis, N. M., Volodina, Z. V.

TITLE:

Formation of the 1,6-Anhydroglucofuranose During the Thermal Decomposition of Cellulose in Vacuum (Polucheniye 1,6-angidroglyukofuranozy pri termoraspade tsellyulozy v vakuume)

PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol 29, Nr 3, pp 997-1000 (USSR)

ABSTRACT:

The present paper is the continuation of the investigation of the chemical composition of the solid distillate which is obtained in the case of the thermal dissociation of cellulose in vacuum. This distillate (yield 75%) consists of 70% l'glucosane and contains carbonyl compounds, acids, their derivatives and phenols. By the application of anionites the products admixed to l'glucosane could be almost removed (Ref 1). After the following removal of l'glucosane by recrystallization a syruplike product was obtained which contained up to 72% substances which had after the hydrolysis a greater reducibility to the anhydride of glucose and a zero rotary power. In the syruplike product dextrogyrate substances could be assumed beside l'glucosane, i.e. polymers of l'glucosane and its isomer, the  $\beta$ -1,  $\delta$ -anhydroglucofuranose. The method of D. Hurd and R. W.

Card 1/2

Formation of the 1,6-Anhydroglucofuranose During the Thornal Decom-

Ligett which consists in the analytical separation of the mono-, di-, and trisaccharides by distillation in vacuum over their propionates was used in order to detect the presence of polymers (Ref 4). Only the monomerpropionate was found to exist. The 1,6-anhydroglucofuranose was separated in the form of its n-nitrobenzoic ester and characterized by the ultimate analysis, melting point and specific rotary power. It could be identified as the n-nitrobenzoyl derivative of the 1,6-anhydroglucofuranose. The 1,6-anhydroglucofuranose is obtained from cellulose with an approximate yield of 3% (with respect to cellulose). A scheme is suggested as to the formation mechanism of the 1,6-anhydroglucofuranose during the thermal decomposition of cellulose in vacuum. There are 7 references, 1 of which is Soviet.

ASSOCIATION:

Institut lesa Akademii nauk SSSR (Forestry Institute of the Academy of Sciences, USSR)

SUBMITTED:

January 24, 1958

Card 2/2

5(4) AUTHORS:

Gatovskaya, T. V., Golova, O. P., Krylova, R. G., Kargin, V. A.

SOV/76-33-5-39/44

TITLE:

Investigation of the Sorption Properties of Cellulose in the

Process of Its Thermal Disintegration (Issledovaniye

sorbtsionnykh svoystv tsellyulozy v protessse yeve termiches-

kogo raspada)

PERIODICAL:

Zhurnal fizicheskoy khimii, 1959, Vol 35, Nr 6, pp 1418-1421

(USSR)

ABSTRACT:

The experimental results of a provious paper (Ref 1) point to the fact that the process of thermal disintegration of cellulose (I) in the course of 90 minutes can be divided into two stages with different peculiarities (Table :). It is assumed that the first reaction stage proceeds in less densely

packed (I), whereas in the second reaction stage a higher packing density prevails and the yield of levoglucosane is proportional to this density. To investigate the packing density, a method with the use of samption isothermals was applied to the present case. The sorption experiments were

Card 1/3

made on one of the investigation samples (Ref 1) of the cellu-

Investigation of the Sorption Properties of Califulose S07/16-33-5-39/44 in the Process of Its Thermal Disintegration

lose SP-700 which was heated to 500° for 10, 20, 40 and 90 minutes at 1\*10°5 mm Hg. The sorption of the steam by (I) decreases with the time of treatment of (I) in a certain value (20 minutes time of treatment) and then remains constant. This points to a condensation of the (I)-packing by a reduction of its polymerization degree (Ref 5). In the first stage of the thermal (I)-disintegration characterizes by a studen rise in the lateglucosane yield, the measure consentation of the molecule packing of (I) is attained. In a further disintegration of the basic mass of (I), these values remain constant. Thus, the experimental results confirm the preticus statements (Refs 6, 7) that the formation of lateglucosane is considerably influenced by the thermal treatment of (I), i. e. its packing density. There are 2 figures, 2 tables, and 7 references, 6 of which are Soviet.

ASSOCIATION:

Fiziko-khimicheskiy institut im. L. Ya. Karpeva, Moskva; Akademiya nauk SSSR, Institut lesa (Physico-chemical Institute imeni L. Ya. Karpev Moscow; Academy of Sciences of the USSR, Forestry Institute)

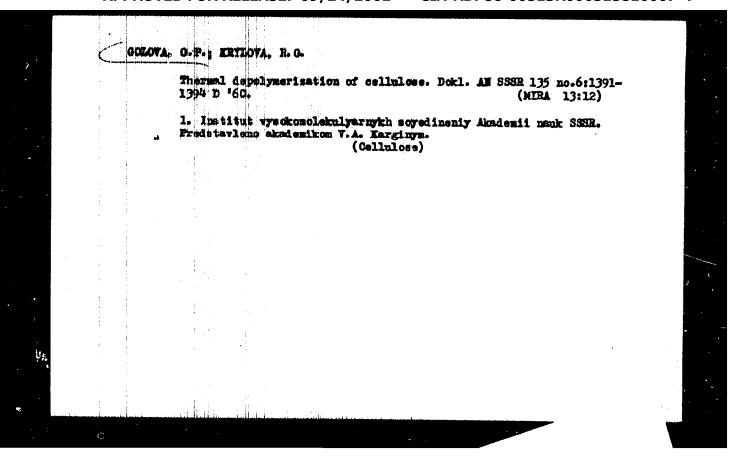
Card 2/3

 Investigation of the Sorption Properties of Cellulose SOV/76-33-6-59/44 in the Process of Its Thermal Disintegration

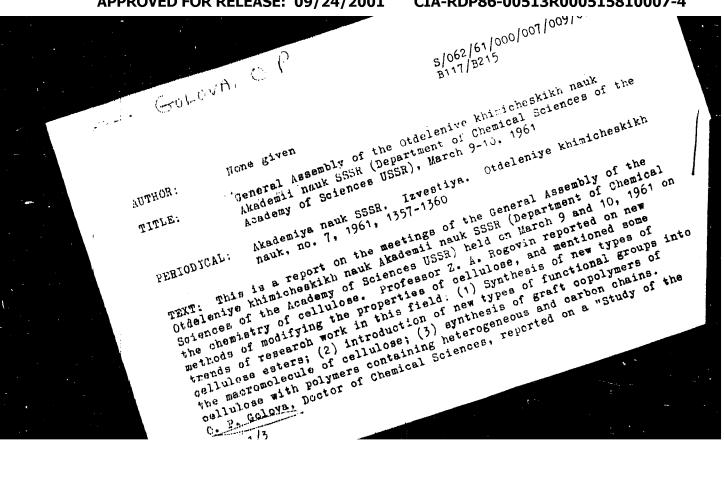
SUBMITTED: December 28, 1957

Card 3/3

	.00	LOVA, D.P.	HATAT, H.S.,	ANDRIYBVSKAYA, Ye.	A <sub>e</sub>	
		Orida by at	tion sechanism ( sometic oxyges	of cellulose and of a. Vysokom. soed.	its approximate models 2 no. 3:337-340 Mr '60. (MIRA 13:11)	
		L. In	stitut less i de (Cellulose)	revealny AM SSSR. (Oxidation)	(Glucosides)	
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CIA-RDP86-00513R000515810007-4" APPROVED FOR RELEASE: 09/24/2001

s/062/61/000/007/009/009 B117/B215

General Assembly of the ...

thermal process of dellulose decomposition". Thermal decomposition was studied in two cellulose modifications of different physical structures: option cellulose and hydration cellulose. Professor P. V. Koslov reported on structural characteristics of cellulose and its derivatives. He said that Y. A. Kargin, together with a number of other scientists, proved the amorphous structure of these natural polymers. He also mentioned that the ideas on the "package"-type structure of polymers expressed by V. A. Kargin, A. I. Kitaygorodskiy, and G. L. Slonimskiy are of greatest value for the examination of the macrostructure of cellulose and its derivetives. S. N. Danilov, Corresponding Member AS USSR, reported on the "Reactivity of esters of cellulose and chitin". He pointed out that chitin and dellulose supplied esters of great practical value. Their production, however, is still difficult. In his own name and on behalf of P. W. Odintsov, Academician AS Latviyskaya SSR, A. I. Kalnin'sh, Academician AS Latviyskaya SSR, reported on the prospects of development of timber chemistry. He stressed the necessity of finding new methods for the utilization of large timber resources, wood waste and vegetable remains in agriculture, and of rationalizing conventional methods. At the same time, theoretical work in this field is to be intensified. N.N. Shorygina,

card 2/3

CIA-RDP86-00513R000515810007-4" APPROVED FOR RELEASE: 09/24/2001

Effect of inorganic components on the cleavage of C-C bonds during the thermal degradation of cellulose. Vysokom.soed. 3 no.4:536-(MIRA 14:4)

1. Enstitut vysokomolekulymrnykh soyedineniy AN SSSR. (Cellulose)

540 Ap 161.

RORSHAK, W.V.; GOLLEVA, O.P.; SERGEYEY, V.A.; MERLIS, N.M.; SHNEYER, R.Ya.

Pulyethers of levoglucesan. Part 1: Polymerization of levoglucesan and its others. Vyankom.scod. 3 no.3:477-485 Mr 161.

(MIRA 1416)

l. Institut slementeerganioheskikh soyedineniy AN SSSR. (Glucepyranese) (Folymerisation)

ODIOVA, O.P.; EPSETEYN, Ya.V.; SERGEYEVA, V.N.; KALNIN'SH, A.I. [Kalnins, A.];
ODIOTSOV, P.N.; MAKSIMENKO, N.S.; PANASYUK, V.G.; Prinimali
uchastiye: MERLIS, W.M.; DURININA, L.I.; BISENIYETSE, S.K. [Biseniece, S.];
GUNDARS, A.M.; PEDORCHENKO, R.I.; MINAKOVA, V.I.

Here method for the complete chemical processing of plant tissues. Gidroliz. i lesokhim. prom. 14 no.7:4-6 to. (mina 14:11)

1. Institute vysokomolekulyarnych soyedineniy AN SSSR (for Golova, Epshteyn, Merlis, Durinina). 2. Institut lesokhozyaystvernych problem i khimii drevesiny AN Latviyakoy SSR (for Sergeyeva, Kninkn'sh, Odintsov, Bisenietse, Gundars). 3. Krasnodarskiy gidrollisnyy zavod (for Maksimenko, Fedorchenko, Minakova).
4. Imepropetrovskiy sel'skokhozyaystvernyy institut (for Panasyuk).

(Plant cells and tissues)
(Botanical chemistry)

GOLOVA, Q.P.4 EFSHTKYH, Ya.V.; SERGEYEVA, V.H.; KALNIN'SH, A.I. [Kalnins, A.];
ODINISOV, P.H.; MAKSIMENKO, N.S.; PANASYUK, V.G.

Outlook for a new method of complete processing of plant materials. Gidrolis.1 lesokhim.prom. 15 no.3:12-15 162. (MIRA 15:5)

1. Institut vysckomolekulyarnykh soyedineniy AN SSSR (for Golova, Rpshteyn). 2. Institut lesokhosysystvennykh problem i khimii drevesiny AM Latviyskoy SSR (for Sergeyeva, Kalnin'sh, Odintsov). 3. Krasnodarskiy gidrolisnyy savod (for Maksimenko). 4. Dnepropetrovskiy sel'skokhosysystvennyy institut (for Panasyuk). (Wood---Chemistry) (Hydrolysis) (Flant cells and tissues)

MAYAT, N.S.; GOLOVA, O.P.; NIKOLAYEVA, I.I.

Mechanism of cellulese exidation by atmospheric exygen in alkaline medium. Chemical composition of the exidation products. Vysekom.seed. 5 no.6:873-874 Je \*63. (MIRA 16:9)

1. Institut vysekemelekulyarnykh seyedineniy AN SSSR. (Collulese) (Oxidatien)

MERLIS, N.M.; ANDRIYEVSKAYA, Ye.A.; VOLODINA, Z.V.; GOLOVA, O.P.

Formation of \$\beta\$-1,6-anhydroglucofyranose in the thermal decompositions of \$\beta\$-D-glucose in a wagram. Zhur. b.khim. 34 no.1:334-336 Ja '64.

(MIRA 17:3)

MAYAT, N.S.; NIKOLAYEVA, I.I.; GOLOVA, O.P.

Mechanism of the oxidative degradation of cellulose in alkaline media.

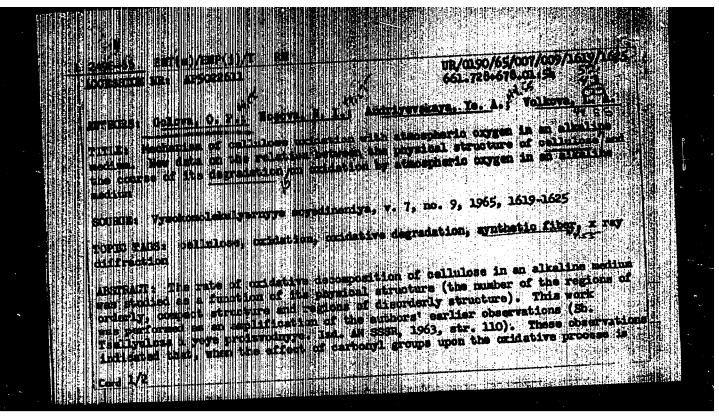
Part 2: Mechanism of the oxidation of cellulose by molecular oxygen in an alkaline medium. Vysokom.soed. 6 no.9:1693-1699 S \*64.

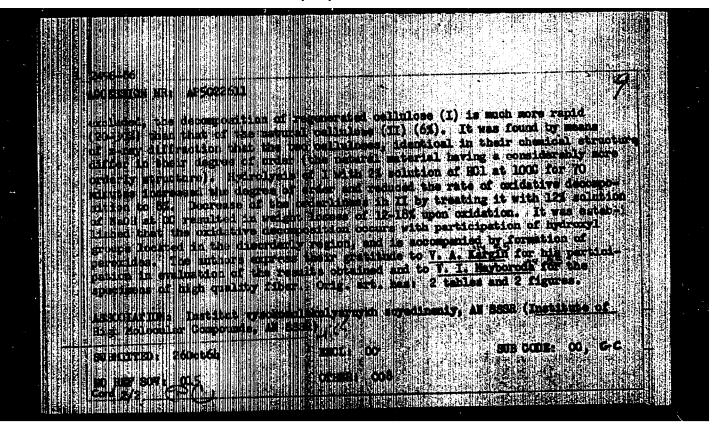
(MIRA 17:10)

1. Institut vysokemolekulyarnykh soyedineniy AN SSSR.

MERLIS, N.M.; VOLODINA, Z.T.; GOLOVA, O.P.

Certain derivatives of  $\beta$ -1,6-anhydroglucopyranoses. Tri-0-ethyland di-0-methyllevoglucosan. Zhur. ob. khim. 34 no.11:3819-3821 N \*64 (MIRA 18:1)





GOLAWA, P., IVANKIV, V. V., PAKHANOV, A. M., ANDRIYEVSKAYA, E. A., and KRILOVA, P. G.

"Thermal degradation of polysaccarides," a paper presented at the 9th Compress on the Chemistry and Physics of High Polymers, 28 Jan-2 Feb 57, Moscow, Forest Research Inst.

B-31084,395

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50 Knizhansy letopis!
No 2, 1956.

GOLOVA, T.F.

Golova, T.F. "Fossilized plants of the Kemchugak lignite deposit of the Chulymo-Yenesei coal-bearing basin," Trudy Tomskogo gos. un-ta im. Kuybysheva, Vol. XCIX. 1948, p. 75-118 - Bibliog: p. 115-17

SO: U-2888, Letopis Zhurnal'nykh Statey, No. 1, 1949

COLOTA, T. F.

"Jurassic Plants From the Region of the Sobolev Site (Chulymo-Yenisey Coel-Bearing Basin)," Tr. Tajak. un-ta, ser. geol., 132, pp 43-65, 1954

The described flors is represented by 25 species, emong which predominate Cladophlebis, Coniopteris, Gingko, Baiers, Creknowskis. According to their composition they correspond well with the Middle Juressic florss of Central Asis, Irkutsk, and Kurnets Basins. For the first time the Chulymo-Yeniney Basin has been associated with Cladophlebis-lobifolis Phill., Coniopteris angustilaba Brick., Lycopodites tenerrisus Er., Crekenowskie latifolis Tur., Podoramites Eichweldi Sching. (Er.) P. of. reinii Geyl., which permits one to outline more precisely the areas of distribution of these species in Siberia. (REhGeol. No 4, 1955)

Sum. No. 681, 7 Oct 55

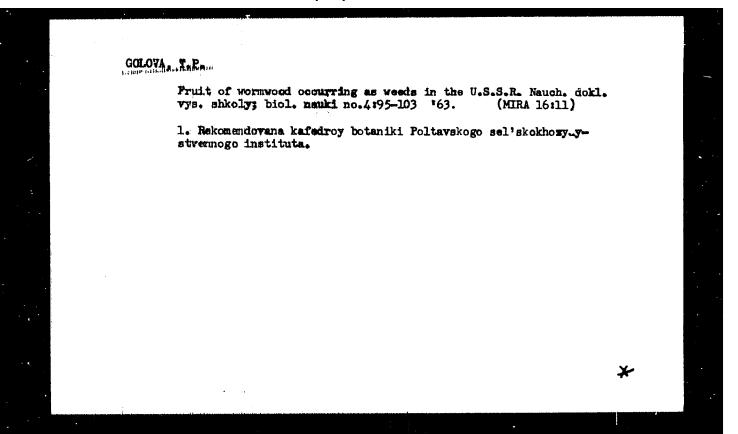
# On the morphological nature of the ovaries of the Compositate. Ukr.bot.zhur. 16 no.6:59-69 '59. (MIRA 13:5) 1. Poltavskiy sel'skokhosyaystvennyy institut. (Ovaries (Botany)) (Compositate)

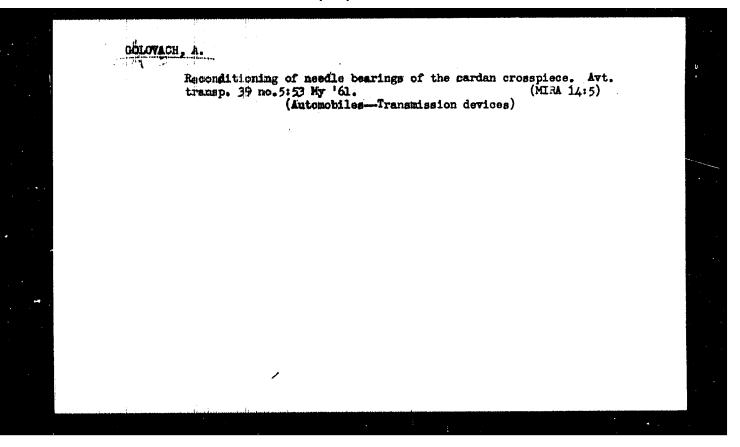
RELYATEVA, N.A.; QUICVA, Z.S., IVANEVA, A.P.; ARUTYUMOVA, K.M.; VCLODIN, B.V., redaktor; PRTYAINKIY, B.S., izdatel\*skiy redaktor; MATAPOV, M.I., tekhnicheskiy redaktor

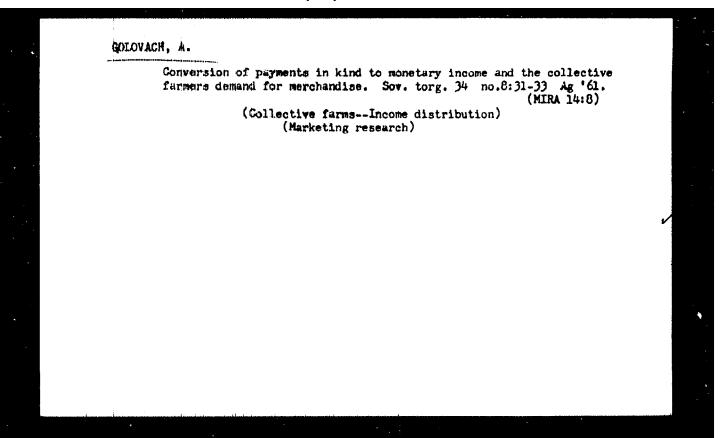
[Collection of technical texts in the Arglish language; a textbook for higher schools] Sbornik tekhnicheskikh tekstov ma angliskom iasyke; uchebnoe posobie die vtuzov. Pod red. N.V.Volodine. Moskva, Izd.-vo lit-ry ma incetr. iazykskh, 1956. 599 p. (Hika 10:10)

(Technology)

(English language--Textbooks for foreigners--Eussien)







GOLGVAGE, Aleksandr Fedorsvichi BYCEKOV, V.P., red.; SARNATSKAYA, G.I., red. isi-va; PARAKHNA, B.L., tekha. red.

[Electric power equipment for woodworking industries] Elektrosilovoe obornsovanie derevoobrabstyvaiushchikh predpriiatii. Moskva, Goslesbunisdat, 1960. 307 p. (MIRA 14:10)

(Woodworking industries) (Electric machinery)

Colovach, A. G. - "Transplanting large tre's with exposed roots", Shornik materialov po kornumal. Khom-vu, No. 6, 1948, p. 58-65

SO: N-3261, April 10 53, (Letopis 'Zhurnal 'nykh Statey, No. 11, 1940).

- 1. GOLOVACH, A. O.
- 2. USSR (600)
- 4. Tree Planting-Leningrad Province
- 7. Experiment in transplanting large trees from Pushkin to Leningrad. Study Bot. inst. AN SSSR. Ser. 6 No. 2, 1952

9. Monthly List of Russian Accessions, Library of Congress, Merch 1953, Uncl.

GCLOVACH, A. G.

**USSR 600** 

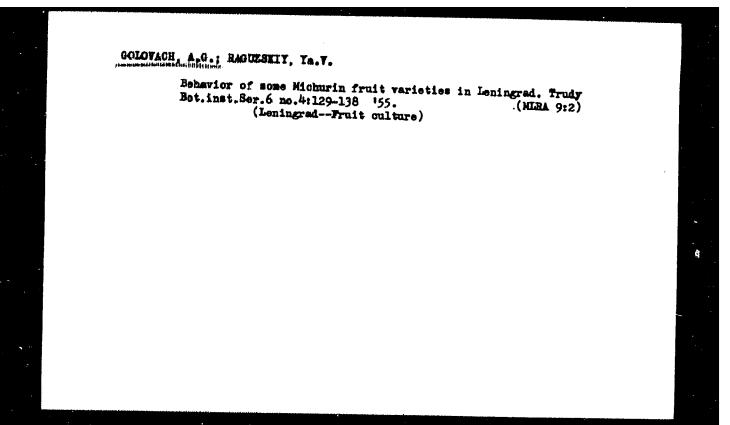
Lamns

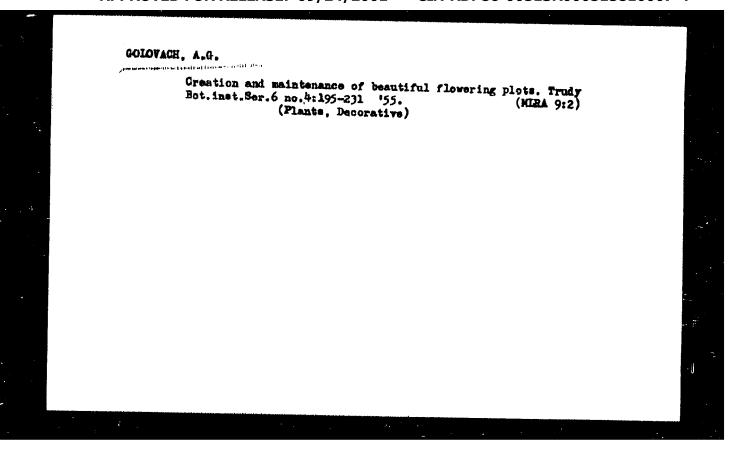
Improvement of Lumns. Friroda 41 No. 3, 1952

9. Monthly List of Russian Accessions, Library of Congress, July 1953. Unclassified.

GOLOVACH, A.G.; PARSADANOVA, K.G., redaktor; GUBER, A., tekhnicheskiy

[Phenological observations in gardens and parks] Fenologicheskie nabliudeniia v sadakh i parkakh. Isd. 2-3. Moskva, Gos. izd-vo "Sovetskaia nauka," 1955. 55 p. (MLRA 8:8) (Phenology)





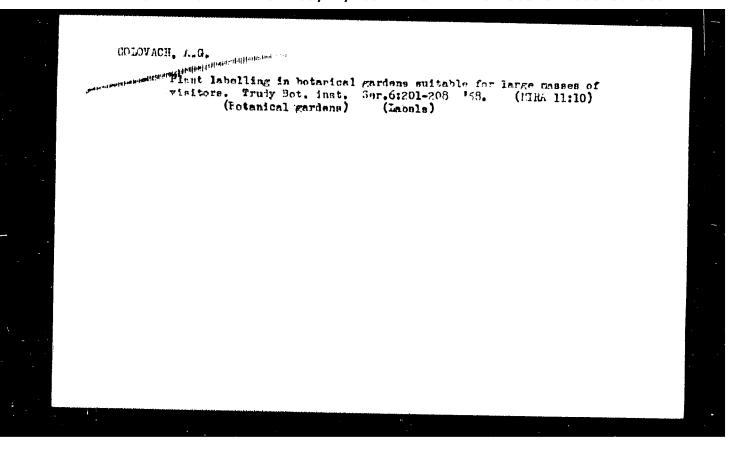
Planning municipal parks. Zhil,-kom.khoz. 6 no.4:29 '56.

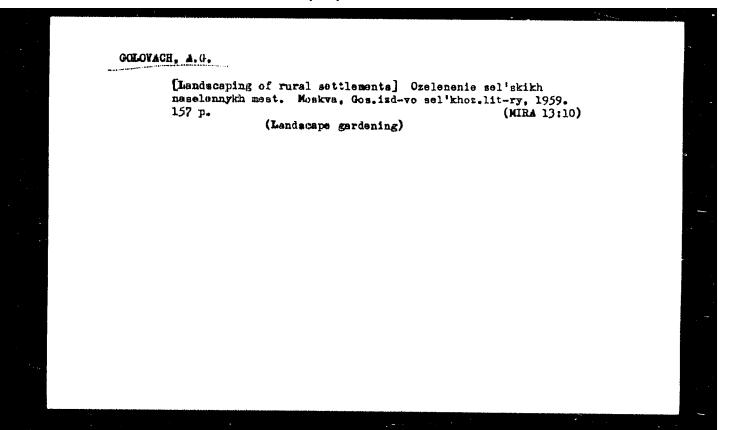
(Parks)

ARTYUSHENED, E.T.; VASIL'YEV, I.V.; GEYRYAN, M.S.; GOLOYACH, A.G.; GRIBOV, V.I.; ZAMMATEIN, B.M.; PIDOTTI, O.A.; PILIPEMED, T.S.; FOLETIED, O.M., kaed.biolog.maik; HODIOMENEO, G.I.; RUSAHOV, F.H.; RAAKOV, S.G.; SOKOLOV, S.Ta., prof., doktor biolog.mauk, red.; FEDOROV, Al.A.; SEIPCHINSKIY, M.V. [deceased]; SHUL'GIMA, V.V.; SHUKHOBODSKIY, B.A.; GOLOWHIN, M.I., red. ind-va; KRUGLIKOVA, M.A., tekhn.red.

[Trees and shrubs of the U.S.S.R.; wild, cultivated, and promising expotic trees and shrubs] Derev'ia i kustarmiki SSSR; dikorastushchie, kul'tiviruenye i perspektivnye dila introduktsii. Moskva. [Vol.4, Angiosperms: Leguminosae - Punicaceae] Pokrytosemennye: Semeistva Dobovye-granatovye. 1958. 973 p. (MIRA 11:12)

1. AN SSSR. Botanicheskiy institut. (Angiosperms) (Trees) (Shrubs)





GORDVACH, A.G.; GHUBOV, V.I.; EAMYATHIN, B.N.; LINCHEVSKIY, I.A.; PETYAYEV, S.I.; PIDOTTI, O.A.; PILIPENKO, F.S.; POLETIKO, O.M.; RODIONENKO, G.I.; SAAKOV, S.G.; SHLIVANOVA-GORODKOVA, Ye.A.; SOKOLOV, S.Ya., prof., doktor biolog.nsuk; SHIPCHINSKIY, N.V. [doceased]; BELKINA, M.A., red.izd-va; BLETKH, N.Yu., tekhn.red.

[Trees and shrubs of the U.S.S.R.; wild and cultivated species and plants considered for prospective introduction] Derevia i kustarniki ISSSR; dikorastushchie, kul'tivirusmye i perspektivnye dlia introduktmii. Moskva, Vol.5. [Angiosperms: myrtle and olive families] Pokrytosemennye: Semeistva mirtovye-maslinovye. 1960. 543 p. (MIRA 13:12)

1. Akademiya nauk SSSR. Botanicheskiy institut.
(Myrtle) (Olive) (Plant introduction)

GOLOVACH, A., muchnyy sotrudnik

Landscape the villages! Nauka i pered.op.v sel'khoz. 9 no.1:
73-74 Ja '59. (MIRA 13:3)

1. Botanicheskiy institut imeni V.L.Komarova.
(Landscape gardening)

# GOLOVACE, A.G. Scientific and practical activities at the Botanical Institute of the Academy of Sciences of the S.S.S.R. Bot. zhur. 46 no. 2:297-306 F '61, (MIRA 14:2) 1. Botanicheskiy institut im. V.L. Komarova Akademii nauk SSSR; Leningrad. (Botanical research)

MAL'KO, Ivan Hatveyevich; GOLOVACH, A.G., red.; DOLGOVA, K.N., red. ind-va; KHKNOKH, F.M., tekhn. red.

[Construction and care of gardens and parks]Sudovo-parkovoe structel'stvo i khosiaistvo. Isd.3., ispr. i dop. Moskva, Isd-vo M-va kommun.khom. RSFSR, 1962. 199 p. (MIRA 16:1) (Landscape architecture)

MAL'NO, Ivan Matveyevich; COLOVACH, A.G., kand. biol. nauk, nauchr. red.

[Gerdens in yerds and within residential areas] Dvorovye i vnutrikvartal nye sady. Leningrad, Stroiizdat, 1965. 76 p. (MIRA 18:3)

GROZDOV, Horis vindimirovich, prof., doktor biol. nauk;
GGLOYACH, A.L. kant, biol. nauk, retsenzent; AKIMOV,
F.A., dott., kand. sel'khoz. nauk, otv. red.;
ARPIGOOV i.V., red.

(How to make a herbarium; collection and drying of plants.
Texticol for students of the forestry faculty) Kak sostavlaa' gerbarti; stori i samebivante rastenii. Uchebmoe posobia dli studentov lesckhozialstvennoge fakulteta, Leningrad, Vses. sacctoryi lesckho. in-t, 1962. 66 p.

(MIRA 18:7)

Manavich [Ivanytekyi, V.I.]; RUBANOVSKIY, P.M. [Rubanovs'kyi, P.M.],

[Commodity and monetary relations during the period of large-scale building of communism] Tovarno-hroshovi vidnosyny v period roshormutoho budivnytatva kommismu. Kyiv, 1961. 46 p. (Tovarystvo dlia poshyrennia politychnykh i naukovykh snan' Ukrains'koi RSR. Ser.3, no.3)

(Russia—Commerce)

TERESHCHENKO, I.F.; MOSKVIN, O.I.; DARAGAN, M.V.[Darahan, M.V.];

ANISIMOV, V.P.; YARMOLINSKIY, M.R.[IArmolyns'kyi, M.R.];

BULGAKOV, P.S.[Bulhakov, P.S.]; KUTS, V.K.; KASHFUR, A.V.;

VASTLENKO, G.K.[Vasylenko, H.K.]; KUKOLEV, V.D.[Kukoliev,

V.D.]; SIGOV, S.G.[Sihov, S.H., deceased]; NAGIRNYAK, P.A.

[Nahirniak, P.A.]; VETCHINOV, I.A.[Vietchynov, I.A.];

ZADOROZENYY, V.K.; DROSOVSKAYA, L.I.[Drosovs'ka, L.I.];

SHKITINA, M.I.; PROSHCHAKOV, O.M.; MOKIYENKO, B.F.

[Mokitenko, B.F.]; GOLOVACH, A.V.[Holovach, A.V.];

IVANITSKIY, I.V.[IVANYIS'kyi, I.V.]; KOZAK, V.Ye.;

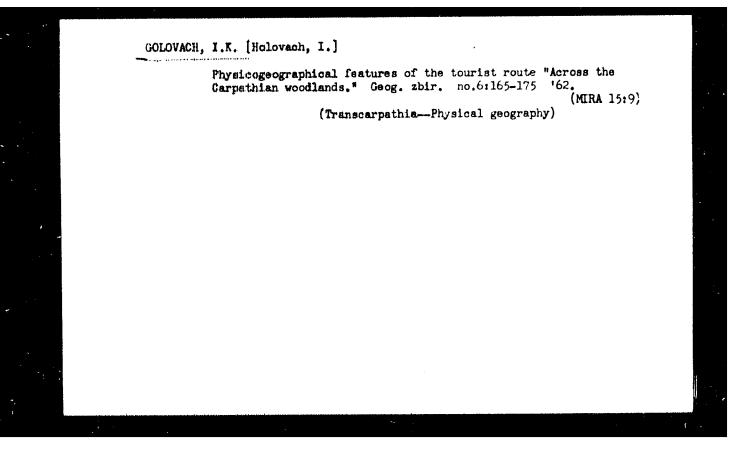
BORYAKIN, V.M., red.izd-va; NESTERENKO, O.O., glav. red.;

DAKHNO, Yu.B., tekhn. red.

[National income of the Ukrainian S.S.R. during the period of the large-scale building of communism] Natsional'nyi dokhod Ukrains'koi RSR v period rozhornutoho budivnytstva kommunizmu. Red.kol.: 0.0.Nesterenko ta inshi. Kyiv, Vydvo AN URSR, 1963. 333 p. (MIRA 16:12)

1. Akademiya nauk URSR, Kiev. Instytut ekonomiky. (Ukraine--Income)

COLOWACH, G.G., Cand. Med. Sci., - (diss) "Data on the question on layered x-ray investigation of lumbosacral region of the spine," Leningrad, 1961, 15 pp (Leningrad Sanitary Hygieme Medical Institute), 300 copies (KL-Supp 9-61, 189)



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	GOLOVACH,	I.K. [Holovac	eh, I.K.]					
r Holic Electric		Information.	Geog. zbir.	no.6:207-209	162.	(MIRA 15:9)		
	1. Uchenyy sekretar' Ukrainskogo geograficheskogo obshchestva. (Ukrains-Geographical societies)							
;								
		:		·.				

# GOLOVACH, I.K.

One-hundredth anniversary of Academician Georgii Nikolaevich Wysotskii's birth, 1865-1940. Izv. AN SSSR. Ser. geog. no.5:137-138 S-0 465. (MIRA 18:10)

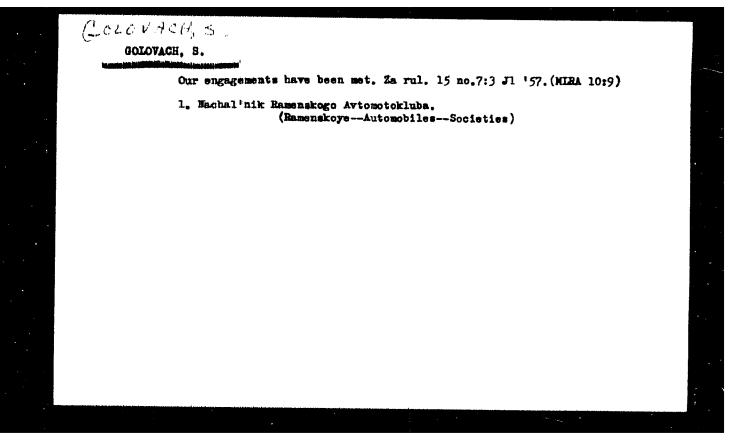
# YASKOL DOVICH, H.V.; GOLOVACH, N.N.

Induction vulcaniser. Ugol' 36 no.7:30 Jl '61. (MIRA 15:2) (Vulcanization) (Coal mines and mining-Equipment and supplies)

### GOLOVACH, P.Y.

Achieved successes will be strengthened and increased, and the seven-year plan will be fulfilled ahead of time. Ugol' Ukr. no.6: 22-24 Je '60. (MIRA 13:7)

1. Upravlyayushchiy trestom Snezhnyanantratsit.
(Donets Basin--Coal mines and mining--Labor productivity)



GOLOVACH, V.K.

S/194/61/000/012/010/097 D209/D303

AUTHORS:

Sevast'yanov, V. V., Likhterov, I. M., Petukhov, V.N., Sherman, B. P., Fedotov, V. K. and Golovach, V. K.

TITLE:

Introducing level-meters to nonferrous metallurgy

plants

PERIODICAL: Referativnyy shurnal, Avtomatika i radioelektronika, no. 12, 1961, 31, abstract 12A229 (Radioakt. izotopy i yadern. izlucheniya v nar. kh-ve SSSR. V. 3, M., Gostoptekhisdat, 1961, 162-164)

TEXT: Described is a high sensitivity positional level-meter (L) type \( \frac{\gamma\_{\eta}}{1} - 10.13 \) (URP-10.13) for signalling attainment of the degree of separation between two substances of different densities without direct contact with the system under investigation. The separation is determined by recording the change of intensity of \( \frac{\gamma}{\gamma} \)-radiation passing through the mixture. The instrument consists of a power unit, four radiation sources and four radiation receivers. Various installation methods of L are described, depending on the proper-

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			S/194/61/000/012/010/097 Introducing level-meters D209/D303	/		
	;		ties of the mixture. Installation diagrams of L are given. The application of L to the bins of a crushing-agglomerating plant resulted in its automation. There are 2 figures. Abstractor's note: Complete translation.	/		
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			Card 2/2			
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KHACHATRYANIS, I.T.; OVCHINNIKOV, E.V.; GOLOVACH, V.N.;
MITRAKOVICH, T.M.; DROZD, G.V.; DERRIDO; NEOPPORTO, VLADIMIROV, L.A.

[Small-scale mechanization in the construction industry and its effectiveness] Malaia mechanizatsiia chroitelestve i se effektivnost. Minsk, Izd-vo M-va vysshego, srednego spetsialinogo i professionalinogo obrazovaniia BSSR, 1963. 33 p. (MIRA 17:8)

GZHITSKIY, S.Z. [Hahyta'kyi, S.Z.]; SUKHOMLIHOV, B.F.; GOLOVACE, V.K.
[Holovach, V.M.]; PALFIY, F.Tu. [Falfii, F.IU.]; SKOVHOHSKAYA, Ye.V.
[Skovnons'ka, IE.V]

Biochemical indices of blood in local coarse-wool sheep and their bybrids with French Merines. Pratsi Inst. agrobiol. AN URSR
2 pt. 115-12 '55.

(SHEEP--FRISIOLOGY) (BLOOD--ARALISIS AND CHEMISTRY)

GEHITS'HIT, S.Z.; SUKHOMLINOV, B.F.; GOLOVACE, V.M.: PUNIE, I.G.

Hematuria in cattle. Dep.AH URSR no.6:608-611 155. (MIRA 9:7)

1.Chlen-kerespondent AH URSR (for Cahits'kiy)

(Cattle--Diseases)

### COLOYACH, V. N.

GOLOVACH, V. N. -- Indexes of Protein-Carbohydrate Metabolism in the Blood of Cows Infected with Chronic Hematuria. Min Higher Education USSR, Livey, 1856. (Dissertation for the Degree of Candidate in Biological Sciences.)

So.: Knizhnaya Litopis', No 7, 1956.

USSR / Diseases of Farm Ani.als. Diseases of Unknown Etiology R

Abs Jour: Ref Zhur-Biologiya, No 16, 1958, 74246

Author : Gzhits'kiy, S.Z.; Sukhomlinov, B.F.; Golovach, V.M.; Pupin, I.G.; Palfiy, F. Yu.; Kusen', S.I.

: Not given Inst

: Course and Nature of Chronic Hematuria in Cattle Title

Orig Pub: Inform. byul. Nauk.-dosl. in-t zemlerobstva i

tvarinnitstva zakhidn. rayoniv URSR, 1956, vip.1, 35-36

Abstract: It is shown that the causative agent of the disease is a live organism which belongs either to fungi or protozoa, or to bacteria of cellulose fermenta-tion. Falling into the rumen with feed, this or-ganism survives there and secretes products of vital activity which infect the muscosa of the urinary

Card 1/2

32

USSR / Diseases of Farm Animals. Diseases of Unknown Etiology R Abs Jour: Ref Zhur-Biologiya, No 16, 1958, 74246

bladder. The introduction of the contents of the rumen of sick cows into the rumen of healthy cows (by means of a rumenotomy) caused the appearance in their urinary sediment of both cellular elements of the urinary tracts and erythrocytes, the quantity of which in several cases reached 200-400 in the field of vision. The introduction of the contents of the rumen of healthy cows into the rumen of sick ones decreased hemorrhaging in the latter and increased their lifespan. Transfer of healthy cows into an area infected with meaturia led to the appearance of the first signs of the disease in them in four to five months. -- A. G. Lomova

Card 2/2

GZHITSKIY, S.Z.[Hablyte'kyi, S.Z.]; SUKHOMLINOV, B.F.; GOLOVACH, V.M.[Holovach, V.M.]; PAIRIY, F.Yu.

Infect of lactation on the biochemical composition of blood in local black-and-white cows. Pretsi Inst. agrobiol. AN URSR 3 no.2:3-17'56.

(Lactation)

(Blood--Analysis and chemistry)

(Covs)

GZHITSKIY, S.Z. [Hahyta'ky1, S.Z.]; SUKHOMLINOV, B.F.; GOLOVACH, V.H. [Holovach, V.M.];
SECOVROMSKAYA, Ye.V. [Skovrons'ka, IE.V.]

Characteristics of carbohydrate metabolism in swine. Pratsi Inst.
agrobiol. AN URSR 3 no. 2:39-44 '56. (MIRA 11:7)

(Swine--Physiology)

(Carbohydrate metabolism)

GERITSKIT. S.Z.[Hishyta'kyi, S.Z.]; GOLOVACH, V.N. [Holovach, V.N.]; PUPIN, I.O.[Pupin, I.H.]

Chronic hematuria in cettle. Pratsi Inst. agrobiol.AN URSR 3 (MIRA 11:7)

(Hematuria)

(Gows--Diseases and posts)

Golovach, V.N. [Holdwach, V.M.]; PUPIS, I.G. [Pupin, I4H.]

Glucose consumption during hematuris in cattle. Pretsi Inst.
agrobiol. 4N URSR 3 no. 2:65-67 '56.

(Hematuria)

(Governouseses and posts)

(Blood sugar)

USSR/Diseases of Farm Animals - Diseases of Unknown Etiology.

R-3

Abs Jour

: Ref Zhur - Biol., No 4, 1958, 16940

Author

: Guhitakiy, 8.Z.; Golovach, V.N.; Pupin, I.G.; Palfiy,

Faru.; Kusen', B.T.

Inst Title

: On the Etiology of Chronic Homaturia of Cattle.

Orig Pub

: Veterinariya, 1957, No 5, 44-46.

Abstract

: The authors consider that the soil, water, and feed composition have no influence upon the development of hematuria. This is supported by the fact that the transfer of sick animals to some other place has no effect on the course of disease, and that disease occurs in countries with different soils and different fodder vegetation. According to the authors' opinion, the etiological agent of hematuria of cattle is to be looked for in some micro-

organisms of the soil. It is possible that these

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